In the Claims

- 1. (previously presented) A Fe(III) complex having paramagnetic and electron transfer properties comprising an iron cluster in a chemically inert shell, wherein said iron cluster comprises a Fe $_4$ O $_4$ cubane core which is stable over five oxidation states and wherein said chemically inert shell comprises four iron atoms and twelve bridging pyrazolato groups.
- (previously presented) The Fe (III) complex of claim
 wherein said complex comprises a contrast agent.
- 3. (previously presented) A paramagnetic compound having the formula:

$$Fe_8 (\mu_4-O)_4 (\mu-pz)_{12}L_4$$

where the portion of the compound identified as μ_4 -O is a quadruply bridging oxygen atom and μ -pz is a bridging pyrazole ring, and the portion of the compound identified as L is a ligand.

4. (previously presented) The paramagnetic compound of claim 3, wherein said compound comprises a contrast agent.

- 5. (previously presented) The paramagnetic compound of claim 3, wherein said compound has electron transfer properties.
- 6. (previously presented) The paramagnetic compound of claim 3, wherein said bridging pyrazole rings each comprise a halogen or pseudo-halogen attached at the 4 position of the bridging pyrazole ring wherein said halogen or pseudo-halogen is selected from the group consisting of F, Cl, Br, I and CN.
- 7. (previously presented) The paramagnetic compound of claim 3, wherein said bridging pyrazole rings each comprise an organic substituent attached at the 4 position of the bridging pyrazole rings wherein said organic substituent is selected from group consisting of C_nH_{2n+1} , C_nH_{2n-1} , C_nH_{2n-3} , $C_nH_{2n-2}X$, $C_nH_{2n-4}X$ where n is less than 40 and where X is selected from the group consisting of F, Cl, Br, I, CN, OH, NH₂, CHO.
- 8. (previously presented) The paramagnetic compound of claim 7, wherein n is less than 20.

- 9. (previously presented) The paramagnetic compound of claim 3, wherein said bridging pyrazole rings each comprise an aryl group attached at the 4 position of the pyrazole ring.
- 10. (previously presented) The paramagnetic compound of claim 3, wherein said ligand is selected from the group consisting of F, Cl, Br, SCN, OCN, OPh, Ph, and py, where Ph is a phenyl group and py is a pyridine group.
- 11. (previously presented) A Fe(III) complex having paramagnetic and electron transfer properties comprising a metal cluster in a chemically inert shell, wherein said metal cluster forms a cubane core having the formula Fe_4O_4 and is stable over five oxidation states.
- 12. (previously presented) The Fe(III) complex of claim
 11, wherein said chemically inert shell comprises four iron
 atoms, twelve bridging pyrazolato groups and four ligands.
- 13. (previously presented) The Fe(III) complex of claim
 12, wherein said twelve bridging pyrazolato groups each
 comprise a halogen or pseudo-halogen attached at the 4
 position of the bridging pyrazole rings wherein said

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halogen or pseudo-halogen is selected from the group consisting of F, Cl, Br, I and CN.

- 14. (previously presented) The Fe(III) complex of claim
 13, wherein said four ligands each comprise a terminal
 ligand selected from the group of F, Cl, Br, SCN, OCN, OPh,
 Ph, and py, where Ph is a phenyl group and py is a pyridine
 group.
- 15. (previously presented) The Fe(III) complex of claim 13, wherein said four ligands each comprise a bridging ligand selected from the group consisting of pyrazine and bipyridine.
- 16. (previously presented) The Fe(III) complex of claim
 13, wherein said four ligands each comprise a metal.
- 17. (previously presented) The Fe(III) complex of claim
 11, wherein the complex is given by the formula:

$$Fe_8 (\mu_4-0)_4 (\mu-pz)_{12}L_4$$

where the portion of the complex identified as μ_4-0 is a quadruply bridging oxygen atom and $\mu-pz$ is a bridging

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pyrazole ring, and the portion of the complex identified as L is a ligand.

- 18. (previously presented) The Fe(III) complex of claim
 11, wherein said Fe(III) complex comprises a contrast
 agent.
- 19. (new) An octanuclear Fe(III) complex comprising an Fe_8O_4 skeleton supported by 12 peripheral bridging and 4 terminal ligands.
- 20. (new) The octanuclear Fe(III) complex of claim 19, wherein the octanuclear Fe(III) complex further comprises a contrast agent.